

## Permit Fact Sheet

### General Information

Permit Number:	WI-0064378-03-0
Permittee Name:	Brickstead Dairy LLC
Address:	1734 Wayside Rd
City/State/Zip:	Greenleaf WI 54126
Discharge Location:	Lower Fox River and East River Watersheds, groundwater of the state

Animal Units					
Animal Type	Current AU		Proposed AU (Note: If all zeroes, expansions are not expected during permit term)		
	Mixed	Individual	Mixed	Individual	Date of Proposed Expansion
Milking and Dry Cows	1330	1359	1330	1359	12/04/2021
Heifers (800 lbs. to 1200 lbs.)	55	50	55	50	12/04/2021
Total	1385	1359	1385	1359	

### Facility Description

Brickstead Dairy LLC is a Concentrated Animal Feeding Operation (CAFO) owned and operated by Dan Brick. It currently has 1,385 animal units and based on current herd size, Brickstead Dairy has approximately 314 days of liquid waste storage and 59 days of solid waste storage. Brickstead Dairy generates 9,176,830 gallons of liquid manure and 4,430 tons of solid waste annually. Brickstead Dairy has a total of 1,948.9 acres available for land application of manure and process wastewater. Of this acreage, 1,756.9 are spreadable, 984.2 are owned, and 864.7 are rented or controlled through contracts.

Sample Point Designation For Animal Waste		
Sample Point Number	Sample Point Location, WasteType/sample Contents and Treatment Description (as applicable)	
001	Sample Point 001 is for liquid manure and process wastewater that is land applied from waste storage facility 1 (WSF 1). WSF 1 is an earthen pit with concrete floor armoring that was reconstructed in 2003. This facility has a maximum operating level of 466,900 gallons.	
002	Sample Point 002 is for liquid manure and process wastewater that is land applied from waste storage facility 2 (WSF 2). WSF 2 is an earthen pit with concrete floor armoring that was constructed in 2007. This facility has a maximum operating level of 2,203,750 gallons and is the first cell in a two-celled	

Sample Point Designation For Animal Waste		
Sample Point Number	Sample Point Location, WasteType/sample Contents and Treatment Description (as applicable)	
	system.	
003	Sample point 003 is for liquid manure and process wastewater that is land applied from waste storage facility 3 (WSF 3). WSF is an earthen lined storage with concrete agitation pads. This storage is the second cell in a two-celled system with a maximum operating level of 9,872,525 gallons.	
004	Sample Point 004 is for solid manure that is land applied from WSF 1, WSF 2, or WSF 3. Representative samples shall be taken from each waste storage facility when land application occurs.	
005	Sample Point 005 is for any miscellaneous solid manure directly land applied and not stored in a waste storage facility. This includes calf hutch manure, maternity pen bedpack, heifer bedpack, etc. Representative samples shall be taken for each manure source type.	
006	Sample Point 006 is for visual monitoring and inspection of concrete feedlots and associated runoff control system located at the Main Dairy. Proper operation and maintenance is required to ensure discharges meet permit requirements. Weekly inspections are required and shall be recorded according to monitoring program.	
007	Sample Point 007 is for visual monitoring and inspection of the feed storage area and associated runoff control system at the main dairy. Collected leachate and runoff is collected and pumped to WSF 4. Proper operation and maintenance is required to ensure discharges meet permit requirements. Weekly inspections are required and shall be recorded according to monitoring program.	
008	Sample Point 008 is for visual monitoring and inspection of all production site storm water conveyance systems. This includes roof gutter and downspout structures, drainage tile systems, grassed waterways and other diversion systems that transport uncontaminated storm water. Proper operation and maintenance is required to keep uncontaminated runoff diverted away from manure and process wastewater handling systems. Weekly inspections are required and shall be recorded according to monitoring program.	
009	Sample Point 009 is for leachate and other process wastewater that is land applied from waste storage facility 4 (WSF 4). WSF 4 is a concrete lined facility that was constructed in 2020. This facility has a designed maximum operating level of 1,913,931 gallons.	

# 1 Livestock Operations - Proposed Operation and Management

## Production Area Discharge Limitations

Beginning on the effective date of the permit, the permittee may not discharge pollutants from the operation's production area (e.g., manure storage areas, outdoor animal lots, composting and leachate containment systems, milking center wastewater treatment/containment systems, raw material storage areas) to navigable waters, except in the event a 25-year, 24-hour rainfall event (or greater) causes the discharge from a structure which is properly designed and maintained to contain a 25-year, 24-hour rainfall event for this location as determined under s. NR 243.04. If an allowable discharge occurs from the production area, state water quality standards may not be exceeded.

## Runoff Control

The permit requires control of contaminated runoff from all elements of the production area to prevent a discharge of pollutants to navigable waters in accordance with the Production Area Discharge Limitations and to comply with surface water quality standards and groundwater standards. Beginning on the effective date of this permit, (if needed) interim measures shall be implemented to prevent discharges of pollutants to navigable waters. In addition, permanent runoff

control system(s) shall be designed, operated and maintained in accordance with the requirements found in USDA Natural Resources Conservation Service standards and ch. NR 243, Wis. Adm. Code. If any upgrading or modifications to runoff controls are necessary, formal engineering plans and specifications must be submitted to the Department for approval.

### **Manure and Process Wastewater Storage**

The permit requires the operation to have adequate storage for manure and process wastewater and that storage or containment facilities are designed, operated and maintained to prevent overflows and discharges to waters of the state. In order to prevent overflows, the permittee must maintain levels of materials in liquid storage or containment facilities at or below certain levels including a one foot margin of safety that can never be exceeded. If any upgrading or modifications to the storage facilities are necessary, formal engineering plans and specifications must be submitted to the Department for approval.

The permittee currently has approximately 314 days of storage for liquid manure and 59 days of storage for solid manure. The permittee must maintain 180 days of storage, unless temporary reductions in required storage are approved by the Department.

### **Ancillary Service and Storage Areas**

The permittee shall take preventative maintenance actions and conduct visual inspections to minimize pollutant discharges from areas of the operation that are not part of the production area or land application areas. These areas are called ancillary service and storage areas and include access roads, shipping and receiving areas, maintenance areas, refuse piles and CAFO outdoor vegetated areas.

### **Nutrient Management**

With 1,385 animal units, it is estimated that approximately 9,176,830 gallons of manure and process wastewater and 4,430 tons of solid manure will be produced per year. The permittee owns *approximately* 948.2 acres of cropland and rents about 864.7. Given the rotation commonly used by the permittee, 1,756.9 acres are available (or open) to receive manure and process wastewater on an annual basis. The permit requires all landspreading of manure and process wastewater be completed in accordance with an approved nutrient management plan. The permit will require sampling and analysis of manure and process wastewater that will be landspread. Landspreading rates must be adjusted based on sample analysis. The permit requires the permittee to maintain a daily log that documents landspreading activities. The permit also requires the submittal of an annual report that summarizes all landspreading activities. Plans must be updated annually to reflect cropping plans and other operational changes. Among the requirements, the plans must include detailed landspreading information including field by field nutrient budgets.

The permittee is required to implement a number of practices to address potential water quality impacts associated with the land application of manure and process wastewater. Among the permit conditions are restrictions on manure ponding, restrictions on runoff of manure and process wastewater from cropped fields, and setbacks from wells and direct conduits to groundwater (e.g., sinkholes, fractured bedrock at the surface). In addition, the permittee must implement a phosphorus based nutrient management plan that addresses phosphorus delivery to surface waters by basing manure and process wastewater applications on soil test phosphorus levels or the Wisconsin Phosphorus index. Additional phosphorus application restrictions apply to fields that are high in soil test phosphorus (>100 ppm).

The permittee must also implement conservation practices when applying manure near navigable waters and their conduits, referred to as the Surface Water Quality Management Area (SWQMA). These practices include a 100-foot setback from navigable waters and their conduits, a 35-foot vegetated buffer adjacent to the navigable water or conduit, or a practice that provides equivalent pollutant reductions equivalent to or better than the 100-foot setback.

In addition, the permittee must comply with restrictions on land application of manure and process wastewater on frozen or snow-covered ground. Included in these restrictions is a prohibition on surface applications of solid manure ( $\geq 12\%$  solids) on frozen or snow-covered ground during February and March.

## Monitoring and Sampling Requirements

The permittee must submit a monitoring and inspection program that outlines how the permittee will conduct self-inspections to determine compliance with permit conditions. These self-inspections include visual inspections of water lines, diversion devices, storage and containment structures and other parts of the production area. The permit requires periodic inspections and calibrations of landspreading equipment. The permittee must take corrective actions to problems identified inspections or otherwise notify the Department. Samples of manure, process wastewater and soils receiving land applied materials from the operation must also be collected and analyzed.

## Sampling Points

The permit identifies the different sources of land applied materials (e.g., manure storage facilities, milking centers, egg-washing facilities) as “Sampling Points.” For these Sampling Points, the permittee is required to sample and analyze the different sources for nutrients and other parameters which serve as the basis for determining rates of application for these materials. Other areas are also identified as Sampling Points as a means of identifying them as areas requiring action by the permittee, such as an upgrade or evaluation of a certain system or structure (e.g., runoff control systems), even though sampling is not actually required.

## Sample Point Number: 001- WSF 1 (liquids); 002- WSF 2 (liquids); 003- WSF 3 (liquids), and 009- WSF 4 (liquids)

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Nitrogen, Total		lb/1000gal	2/Month	Grab	
Nitrogen, Available		lb/1000gal	2/Month	Calculated	
Phosphorus, Total		lb/1000gal	2/Month	Grab	
Phosphorus, Available		lb/1000gal	2/Month	Calculated	
Solids, Total		Percent	2/Month	Grab	

### 1.1.1 Changes from Previous Permit

Sample point language was updated, sample point 009 was added to more accurately describe the existing production area.

### 1.1.2 Explanation of Operation and Management Requirements

Manure must be properly stored, and land applied according to the permit and nutrient management plan.

### **Sample Point Number: 004- WSF (solids); 005- Misc. Solid Manure**

<b>Monitoring Requirements and Limitations</b>					
<b>Parameter</b>	<b>Limit Type</b>	<b>Limit and Units</b>	<b>Sample Frequency</b>	<b>Sample Type</b>	<b>Notes</b>
Nitrogen, Total		lbs/ton	Quarterly	Grab	
Nitrogen, Available		lbs/ton	Quarterly	Calculated	
Phosphorus, Total		lbs/ton	Quarterly	Grab	
Phosphorus, Available		lbs/ton	Quarterly	Calculated	
Solids, Total		Percent	Quarterly	Grab	

#### **1.1.3 Changes from Previous Permit**

Sample point language was updated and modified to more accurately describe the existing production area.

#### **1.1.4 Explanation of Operation and Management Requirements**

Solid manure sources must be properly sampled and land applied according to the permit and nutrient management plan.

### **Sample Point Number: 006- Concrete Outdoor Lots; 007- Feed Storage Runoff Controls, and 008- Stormwater**

#### **1.1.5 Changes from Previous Permit**

Sample point language was updated and sample point 008 was added to more accurately describe the production area.

#### **1.1.6 Explanation of Operation and Management Requirements**

Proper operation and maintenance is required to ensure unlawful discharges to waters of the state do not occur. Weekly or quarterly inspections are required and shall be recorded according to the monitoring plan.

## **2 Schedules**

### **2.1 Emergency Response Plan**

<b>Required Action</b>	<b>Due Date</b>
Update the Emergency Response Plan: Update the written Emergency Response Plan within 30 days of permit coverage, available to the Department upon request.	12/31/2020

### **2.2 Monitoring & Inspection Program**

Required Action	Due Date
Proposed Monitoring and Inspection Program: Consistent with the monitoring and sampling requirements subsection, the permittee shall update and submit a proposed monitoring and inspection program within 60 days of the effective date of this permit.	01/31/2021

## 2.3 Annual Reports

Submit Annual Reports by January 31st of each year in accordance with the Annual Reports subsection in Standard Requirements.

Required Action	Due Date
Submit Annual Report #1: To include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E.	01/31/2021
Submit Annual Report #2: To include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E.	01/31/2022
Submit Annual Report #3: To include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E.	01/31/2023
Submit Annual Report #4: To include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E.	01/31/2024
Submit Annual Report #5: To include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E.	01/31/2025
Ongoing Annual Reports: Continue to submit Annual Reports until permit reissuance has been completed.	

## 2.4 Nutrient Management Plan

Submit annual nutrient management plan (NMP) updates by March 31 of each year. Note, in addition to annual NMP updates, submit NMP amendments and substantial revisions to the department for written approval prior to implementation of any changes to the NMP.

Required Action	Due Date
Management Plan Submittal: Submit any necessary updates to the Nutrient Management Plan to meet the conditions outlined in this permit (see conditions in the Livestock Operational and Sampling Requirements section).	
Submit NMP Update #1: To include actual cropping, tillage, and nutrient application data from the previous calendar or crop year, consistent with the requirements of department for 3400-025D.	03/31/2021
Submit NMP Update #2: To include actual cropping, tillage, and nutrient application data from the previous calendar or crop year, consistent with the requirements of department for 3400-025D.	03/31/2022
Submit NMP Update #3: To include actual cropping, tillage, and nutrient application data from the previous calendar or crop year, consistent with the requirements of department for 3400-025D.	03/31/2023
Submit NMP Update #4: To include actual cropping, tillage, and nutrient application data from the previous calendar or crop year, consistent with the requirements of department for 3400-025D.	03/31/2024
Submit NMP Update #5: To include actual cropping, tillage, and nutrient application data from the previous calendar or crop year, consistent with the requirements of department for 3400-025D.	03/31/2025

Ongoing NMP Updates: Continue to submit Annual Updates to the Nutrient Management Plan until permit reissuance has been completed.	
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## 2.5 Submit Permit Reissuance Application

Required Action	Due Date
Reissuance Application: Submit a complete permit reissuance application 180 days prior to permit expiration.	06/01/2025

## 2.6 Explanation of Schedules

**Emergency Response Plan, Monitoring and Inspection Program – Schedules consistent with permit requirements**

**Annual Reports, Nutrient Management Plan, Submit Permit Reissuance Application - Schedules consistent with permit requirements.**

**Other schedule items are required to comply with s. NR 243 and WPDES permit conditions.**

## Attachments:

Substantial Compliance Determination

Plan Approval Letter(s)

Public Notice

## Proposed Expiration Date:

November 30, 2025

## Prepared By:

**Holly Stegemann      Agricultural Runoff Management Specialist**

**Date: 10/15/2022**